

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.
2. Authorization for this examiner's amendment was given in a telephone interview with Hean Koo on December 14, 2009.

The application has been amended as follows:

In reference to claims.

Claim 28, line 12, after "to the sphere", delete "via", add "by vibrating".

Claim 39, line 12, after "to the sphere", delete "via", add "based on the sensor signals by vibrating".

Cancel claim 50.

Claim 51, line 7, after "to the sphere", delete "via", add "based on sensor signals by vibrating".

Cancel claim 63.

Allowable Subject Matter

3. Claims 28-34, 37-48, 51-56 and 60-61 are allowed.
4. The following is an examiner's statement of reasons for allowance: The present invention relates to a haptic device using in a trackball apparatus by vibrating a roller that configured to output feedback to the sphere of the trackball.

The closest prior art of Engel et al. (U.S Patent No. 5,781,172) shows a similar system which also provides haptic feedback to the trackball system. However, Engel et al. fails to disclose

“an actuator coupled to the housing and configured to output haptic feedback to the sphere by vibrating the at least one roller, the haptic feedback being based on the sensor signals, wherein any force to assist or resist motion of the sphere is supplemental to the haptic feedback that is output via the at least one roller.”

This distinct feature has been added to independent claims and renders them allowable..

5. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled “Comments on Statement of Reasons for Allowance.”

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to DUC Q. DINH whose telephone number is (571)272-7686. The examiner can normally be reached on Mon-Fri from 8:00.AM-4:00.PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, AMR A. AWAD can be reached on (571)272-7764. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Duc Q Dinh/
Primary Examiner, Art Unit 2629